FOREST INSECT CONDITIONS
on the
PAYETTE NATIONAL FOREST
1967

The following report depicts major forest insect problems encountered on the Payette National Forest during 1967. Information for the report was accumulated from prior knowledge of various insect problems, aerial detection flights and on-the-ground biological evaluations. In many instances forest insect problems were brought to our attention by verbal and written reports from your staff.

Populations of spruce beetle have built up rapidly in decked material along the Hazard Lake, Scribner Lake road and at the present time, are posing a threat to standing spruce timber. Mountain pine beetle populations on the Forest have remained at relatively low activity levels with only small group type infestations being observed. Adjacent to Federal lands, potential buildups of mountain pine beetle are in the making along the North Fork of the Payette River in lodgepole and ponderosa pine. The State Department of Public Lands has been notified of the situation and have not as yet decided whether suppression should be undertaken. Western pine beetle activity was mainly confined to small group killing scattered throughout ponderosa pine stands. Ips activity remains at a relatively high level. However, group sizes are diminishing and the number of trees attacked per group decreased during the past field season. Attacks by the Douglas-fir beetle appear to be slowly increasing on a forest-wide basis. Spruce budworm populations declined in the primitive area with regard to intensity of attack and area defoliated. Outside of the primitive area, budworm activity was observed in three separate locations. Of these, two were detected for the first time. The third infestation near Split Creek Point, expanded in size and defoliation intensity for the second year. Following is a more complete and comprehensive discussion of these problems.

SPRUCE BEETLE - Dendroctonus obesus (=engelmanni)

In 1966, construction of a new road was started from Hazard Lake toward the Scribner Lake country. Right-of-way timber was cleared, and decked material left in place from 1966 through 1967. The decks were primarily composed of Engelmann spruce. In 1967, a continuation of road construction added more downed material and new decks to the roadside areas. On September 6, inspection of these decks and downed material showed heavy populations of spruce beetle. The new decks on the Scribner Lake side had not been infested as trees were felled after beetle emergence and attacks were completed. Spruce beetle populations had built up to high densities and by the end of October, had moved into nearby standing green trees where they will overwinter. Hibernating adults will start emerging sometime after mid-May, 1968. At that time, standing trees will undoubtedly be attacked. This is the most serious threat from spruce beetle that we have encountered on the Payette National Forest in several

years. Our findings and recommendations were verbally reported to the timber staff officer and subsequently summarized in a memorandum dated September 8, 1967.

We understand that Boise Cascade Corporation was contacted and advised to haul infested right-of-way decks as soon as possible. They said an effort would be made to do this; however, at this writing, the decks remain in their original locations. This can be traced to the fact that new road construction prevented logging trucks from getting to the infested material and hauling it out by the time snow closed the road. It was our observation that the road contractors were not keeping the road open on schedule and therefore, the entire hauling operation came to a halt. In view of this a recommendation was made in our October 11, 1967 memorandum to burn the infested material if possible. At this time, the threat of an epidemic remains at a very high level. Arrangements have been made with Boise Cascade Corporation to go in with over-the-snow equipment next spring and fell trap trees in an effort to divert the attacking beetles to the downed material and keep them from hitting standing trees. Information on the use of trap trees has been furnished the Timber Staff Officer.

It is our understanding that harvesting operations will be initiated on an adjacent 12 MM bd.ft spruce sale this year. If cutting is started soon enough, there will probably be a sufficient amount of slash, long butts, and culls to absorb beetle flights. However, this area usually does not open up until beetle flights are well under way. Therefore, the only logical plan of action at this time is to set up and maintain a practical trap tree program.

MOUNTAIN PINE BEETLE - WESTERN PINE BEETLE

Mountain pine and western pine beetle populations in lodgepole and ponderosa pine have not shown large scale increases over what was detected on the Forest during 1966 surveys. Attacks by both insect species are limited to small groups of trees in widely scattered locations. To date, we have not detected any new areas of activity that would indicate epidemic trends. Mention, however, should be made of an epidemic situation in lodgepole and ponderosa pine stands on the southern fringes of the town of McCall, and extending southward along the North Fork of the Payette River. This is an area of past mountain pine beetle activity which was treated during the winter of 1962-63. This year small groups of faders were observed along the river bottom and in trees near the southern edge of town. Subsequent brood examination showed heavy buildups of the mountain pine beetle with new attacks far exceeding old ones. This was reported to the State Department of Public Lands and a survey of the area was set for January, 1968. If funds are available, they will start treating during the winter and spring of 1968. Treating will probably be felling and burning followed by chemical treating in the spring. So far there has been no indication of the infestation spreading east and west toward Forest lands.

IPS

Ips beetles reached epidemic levels during the 1966-67 field season, with 1966 being characterized as the year of heaviest damage. This year's aerial and ground surveys indicate that Ips beetles are still active, however, group size and numbers of trees attacked per group have decreased. This is not to say that the Ips beetles cease to be a threat. High residual populations still exist in ponderosa pine, primarily on the west side of the Forest. These buildups are undoubtedly the result of optimum Ips development conditions in 1966 and 1967 during protracted periods of high temperature, low precipitation, and low humidity. Ips are known to build up rapidly and cause standing tree attacks under these conditions. When the aforesaid weather conditions prevail, logging slash and thinnings are prime sources for rapid buildups. In many cases the only effective way of dealing with this problem in proposed thinning units, is to delay cutting until after August 15. This is being pointed out as Regional Cutting Guides on thinning specify July 1 as the safe operating date. When we experience weather patterns of the last two years, an on-the-ground decision has to be made to defer cutting or Ips beetle most assuredly will become a problem.

It appears that the direct action of using a prescribed burn in July was very effective in substantially reducing Ips beetle populations in the Calfpen-Wickiup area. Fall evaluations showed very little activity surrounding the burn. Even though there is an inherent rish of burning during the high fire danger period, this practice is commendable.

DOUGLAS-FIR BEETLE - Dendroctonus pseudotsugae Hopk.

Douglas-fir stands on the Forest have been attacked by the Douglas-fir beetle for several years with attacks concentrated in groups of mature and over-mature, highly susceptible timber. Heavy buildups commenced in 1960 and carried through until populations collapsed due to natural causes in 1962. From 1963 until 1966 Douglas-fir beetle activity remained at a relatively low level. This year, detection survey data indicated an increase in group killing throughout most of the Forest. Wherever and whenever possible, infested groups should be included in existing sales, since this is the only economical method of achieving effective control of the Douglas-fir beetle.

SPRUCE BUDWORM - Choristonura occidentalis

Spruce budworm populations have persisted in the Idaho Primitive Areas for several years. Budworm populations have closely followed fluctuating patterns on the adjoining Salmon, Challis, and Boise National Forests. The infestations at one time encompassed over two million acres on four Forests and was referred to as the Salmon River infestation. During the fall of 1965 and the spring of 1966, larval populations were considerably reduced by sublethal temperatures. As a consequence, the infestations declined sharply during 1966-67.

This year, three infestation centers outside the Primitive Area were detected during aerial surveys. These infestations are located, (1) along the South Fork of the Salmon River in Deer and Contux Creeks, (2) near Split Creek Point, and (3) along the main Salmon River from Fall Creek eastward into Bear Creek and the lower portion of Maxwell Creek. Areas of spruce budworm defoliation by damage classes as determined by the 1967 aerial surveys follows:

	DEFOLIATION INTENSITY			
Area	Light (Acres)	Medium (Acres)	Heavy (Acres)	Total Acres
Primitive	42,900	8,200	-	51,100
Split Cr. Point	-	6,900	-	6,900
So.Fk.Salmon River & Deer & Contux Cr.	1,560	-	-	1,560
Fall, Bear, & Maxwell Cr.	18,440	1,600	-	20,040
Total	62,900	16,700		79,600

Egg mass surveys were made in the three areas outside of the Primitive Area. These surveys give a reliable estimate of population trend and resulting damage. Predictions as to the 1968 population level and the amount of defoliation that can be expected in 1968 follows:

Sampling Locations	No. Egg Masses /1000 Sq.In. 1967	Percentage Expected Defoliation 1968
Secesh	2.0	≤15%
Split Creek Point	3.0	≤15%
Fall Creek	.9	≤15%
Bear Creek	4.1	≤15-25%
Maxwell Creek	4.3	≤15-25%

The foregoing defoliation predictions based on egg mass surveys, may be lower than what will actually be encountered next year. Sampling procedures were based on five tree plots and there is a possibility that we may not have sampled representative areas. If this is the case, then it is felt there is a good possibility of 50% to 75% defoliation occurring in the Split Creek Point, Secesh, Bear Creek, and Maxwell Creek areas.

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